Before the

Federal Communications Commission

Washington, D.C. 20554

In the Matter of	)	
	)	
Modernizing the FCC Form 477 Data Program	)	WC Docket No. 11-10
	)	

REPLY COMMENTS OF CONNECTED NATION, INC.

In its Comments,[1] Connected Nation, Inc. (CN) proposed the establishment of an independent, single, neutral, third-party clearinghouse for the collection of broadband data to ensure sufficient data quality and granularity, protect proprietary and confidential infrastructure and subscriber location information, streamline the reporting process for providers, and ensure that consistent mechanisms are in place to audit and validate the data. This clearinghouse would carry out broadband data collection and analysis; map broadband availability, platforms, and speeds using GIS; track where federal investments have been made to improve access; and process feedback submitted by consumers and conduct on-site field validation where necessary to ensure continual refinement of the maps. Furthermore, the clearinghouse would support federal decision-making on infrastructure investments, ensuring accountability for those dollars as they are spent, and protecting sensitive provider data all at the same time.

Upon reviewing other *Comments* submitted—specifically those from the provider community—CN believes a clearinghouse may be the only feasible and effective means to collect more accurate and granular data while avoiding an overly burdensome data preparation and submission process for providers. In these *Reply Comments*, we will summarize some of the concerns voiced in various *Comments* around greater granularity of reporting and take the

[1] Connected Nation's Comments on Modernizing the FCC Form 477 Data Program.

opportunity to discuss once more how an independent, single, neutral, third-party clearinghouse for the collection of broadband data could effectively solve the issues raised.

The responses to the question of whether or not to collect data at a greater level of granularity are mixed. With entities such as the National States Geographic Information Council (NSGIC)[2] and the Utah Governor's Office of Economic Development[3] encouraging the collection of *more granular* broadband data, numerous others, particularly those in the provider community, reject the idea due to several concerns. To be clear, Connected Nation believes that greater data granularity is essential to solving the country's growing Digital Divide. It is impossible to fix a problem if the extent of that problem is not adequately defined.

A clearinghouse would solve the issue of overburdening small providers

First, according to some commenters, increasing granularity in reporting may be overly burdensome for small providers. Verizon, for example, stated that "[w]hile large broadband providers often have web tools reflecting potential service availability at the address level, smaller providers, including many providers serving rural areas, may not have address-level availability data. And even those providers that make tools available on their websites to allow subscribers or potential subscribers to check whether broadband is likely available at their

[2] NSGIC "supports increasing the level of granularity at which the Form 477 data is collected. NSGIC believes that the mapping of discrete physical sites—to include all addressed properties—where broadband and other communication services are likely to be demanded is the key companion map reference layer needed to complement the nation's broadband analysis needs. Address and site points, especially in rural America, are exactly where broadband buildout and un- and under-served locations need to be tracked to accomplish the FCC's policy goals of a fully broadband connected nation. Geocoding using address ranges, aggregation to census block or zip code geography, and the modelling services along road centerlines are very poor substitutes for the discrete representations of the location (x,y) of actual addressed properties and other sites." NSGIC's Comments on Modernizing the FCC Form 477 Data Program, p. 1.

[3] "Allowing providers to submit data on a sub-census block level (whether by raster or polygon) is crucial to understanding and evaluating gaps in coverage, especially in rural areas where census blocks can be quite large." Utah Governor's Office of Economic Development Comments on Modernizing the FCC Form 477 Data Program, p. 2.

location may not be able to compile that data into one single dataset, or coordinate approaches between providers."[4] Additionally, the Wireless Internet Service Provider Association (WISPA) showed concern with respect to Commission proposals such as sub-census block data collection and others methods stating that "the compliance difficulty and collection burdens for small fixed wireless providers far outweigh the benefits."[5]

Given CN's extensive experience working with small providers across the country, we fully respect and understand the challenges that these providers face, which is precisely why our *Comments* call out the need for a clearinghouse. In our *Comments,* we acknowledge the issues address-level and other reporting proposals raise for small ISPs and we state that as a solution, "[i]n working with a national broadband data clearinghouse, rather than requiring providers to submit an entirely new dataset every six months, the clearinghouse could efficiently work with providers and their previously submitted baseline data to update coverage accordingly. The clearinghouse's oversight of this process can reduce burdens on providers and make the data and mapping process more efficient and accurate, especially in highlighting areas that continue to be unserved and underserved." Stated simply, a clearinghouse would shift away the burden of reporting accuracies from providers and place it on the established neutral, third-party entity, without even having to mention GIS or other formatting details in order to be effective. Connected Nation's experience with the State Broadband Initiative (SBI) Program saw consistently high provider participation rates in a largely voluntary program because we worked within their capabilities rather than requiring specific data types or formats. We believe a

[4] Verizon's Comments on Modernizing the FCC Form 477 Data Program, p. 11.
[5] WISPA's Comments on Modernizing the FCC Form 477 Data Program, pp. 7-8.

clearinghouse could serve a similar role in facilitating more accurate and granular broadband data.

A clearinghouse would keep reporting costs low for providers

Another valid argument raised in submitted *Comments* was the potentially high costs associated with requiring reporting broadband data at greater granularity. When looking at address-level reporting, NCTA makes the point that "[m]any companies would have to implement an entirely new process, and reconfigure their internal systems, in order to track such information on a meaningful, accurate, and footprint-wide basis."[6] NCTA then goes on to say that "[a]lthough costs will vary by provider and with the number of affected census blocks, even assembling workable and standardized lists of candidate addresses within census blocks a provider serves can cost several million dollars. And this is all before even considering the additional costs of individually reviewing and (where needed) physically inspecting addresses in the field to verify serviceability and creating new records of those addresses."[7] AT&T shares its concern for the costliness of increasing granularity in reporting, stating that an "industry-wide data production obligation that is at least 20 times larger than the data in the current production . . ." and mentions that they do not have a system capable of reporting deployment data at the address level, currently.[8] Furthermore, WISPA took the opportunity to share that its members

[6] NCTA-The Internet & Television Association's Comments on Modernizing the FCC Form 477 Data Program, p. 6.
[7] Linked footnote 13 states "For instance, one NCTA member estimates that it would need to identify, standardize, review the serviceability of, field-verify, and create new records for roughly 15 million potential addresses within its service area—at a cost of over $15 million before considering additional the cost and time commitment of assessing the serviceability of each address, including roughly $90 for each "walk-out" needed to verify conditions in the field. This cost is not insignificant, as some of NCTA members have millions of census blocks, of which a significant portion (hundreds of thousands of blocks) are rural." NCTA-The Internet & Television Association's Comments on Modernizing the FCC Form 477 Data Program, p. 7.
[8] "AT&T estimates that address level reporting would increase the size of its submission by at least 35 times for the 2.6 million census blocks it serves. Furthermore, AT&T does not currently have a system capable of reporting

already exert a great deal of time and capital in complying with current Form 477 requirements. Further reporting could be even more burdensome.[9]

CN recognizes these very real issues facing providers and, again, believes that a broadband data clearinghouse could resolve the concerns over costly reporting requirements. Based on our own experiences, we know that it is possible for a clearinghouse-type entity to come alongside providers and assist them in submitting data in any format they can offer, so that it can then be converted into GIS format. In our past work through the SBI program, we found that hiring a GIS resource or creating new reporting mechanisms within a company was not necessary in order for a provider to effectively participate in the program. We believe that a clearinghouse could serve as a provider liaison in a similar capacity and shift the burden away from providers and on to the data collection clearinghouse, which would have the responsibility of delivering a more granular understanding of service areas to the Commission, Congress, the states, and the general public.

A clearinghouse would ensure data accuracy.

A third issue mentioned among many of the provider *Comments* we read was that increasing the reporting granularity would in fact result in greater inaccuracies. In discussing the Commission's review of increasing the granularity in 2013, Verizon stated that the complexity

broadband deployment data at the address level. AT&T would be required to invest in new software development and systems integration projects to implement this requirement, which is estimated to cost at least $2 million and would take at least one year to complete." AT&T's Comments on Modernizing the FCC Form 477 Data Program, p. 16.

[9] "In fact, to comply with the 2014 change in requirements, the vast majority of WISPA members responding to our recent Form 477 Survey incurred additional costs for reporting via census blocks. Seventy percent purchased new software or vendor services. Almost half, 47 percent, paid overtime for in-house personnel, and 29 percent hired outside personnel (including engineering consultants, part-time workers and/or lawyers). The above combined percentages exceed 100 percent, showing that many members had to shoulder the costs of all three expenses." WISPA's Comments on Modernizing the FCC Form 477 Data Program, p. 5.

and burdens "that the Commission identified in 2013 are still present in 2017,"[10] while AT&T said, it would "inject a significant level of inaccuracies into the data collection, and because address-level reporting would exponentially increase the burden on filers."[11] USTelecom discussed the issue stating "[s]ub-census block determinations would further degrade accuracy of reporting on the FCC Form 477 because experience has shown that it is much better to work off a standard unit."[12]

Connected Nation believes that the accuracy of the data is already a serious issue with current Form 477, as we discussed in depth in our *Comments* and in our testimony before Congress on June 21, 2017.[13] Currently, if even one household in a given block is served, the entire block is considered as having service, resulting in a significant overstatement of availability—particularly in rural areas where census blocks can be very large. Also problematic are providers that do not have GIS capabilities and thus have no way of visualizing their service territories to ensure accuracy which results in both overstated and understated reporting. And since Form 477 is now used to direct federal subsidies toward areas lacking robust broadband, missing data and inaccurate filings also may have the effect of understating service capabilities, putting the providers themselves at risk for overbuild.

Given the reliability concerns of the Form 477 Data Program, we believe that a solution must be found to understand where the unserved areas truly lie. A neutral, third-party clearinghouse of data would do just that by working with the provider community to collect infrastructure and/or subscriber location data under a rigorous nondisclosure agreement

[10] Verizon's Comments on Modernizing the FCC Form 477 Data Program, p. 11.
[11] AT&T's Comments on Modernizing the FCC Form 477 Data Program, p. 14.
[12] USTelecom's Comments on Modernizing the FCC Form 477 Data Program, p. i-ii.
[13] Testimony of J. Brent Legg Before the U.S. House of Representatives Committee on Energy and Commerce, Subcommittee on Communications and Technology.

framework, but also by conducting robust field validation and audits of the maps once they are produced. This should involve the deployment of network engineers to visit communities, visually inspect infrastructure assets, conduct drive-testing of wireless networks, and make coverage adjustments to the maps accordingly, sharing the field-collected information with the providers for their internal benefit. The public should also play an important role in providing feedback on the map, and their feedback should be used to both engage providers in refining coverage depictions, as well as helping to determine where field audits should take place.

In summary, CN believes a neutral, independent, third-party clearinghouse of broadband data could solve many of the very tangible arguments raised by the provider community while still increasing the much-needed accuracy and granularity of broadband data collection. By understanding where unserved areas truly are, the Commission may move forward with finding solutions to finally bring broadband to America's unserved and underserved people and close the Digital Divide.

Respectfully submitted,

J. Brent Legg
Vice President, Government Affairs
Connected Nation, Inc.
blegg@connectednation.org
(202) 340-6446

October 24, 2017